A Rebuild of A Burke & James "Watson"- 5"X7" View Camera

James R. Kyle - 12-2018

I found a ***Burke and James*** "Watson" - Five by Seven inch - Field View camera at a local antique mall, after a friend told me about it, for fifty dollars. After looking it over, I made the quick decision to buy it, remove the paint, and rebuild to restore to a working condition. Already having a lens with a pneumatic operated shutter (Incase this lens, shown, will not work). I knew that it would not only be workable, but also practical for the design. (Thus = This became my ***"Winter Project"*** for 2018.)

Oblique Overall View

Front View

Rear View

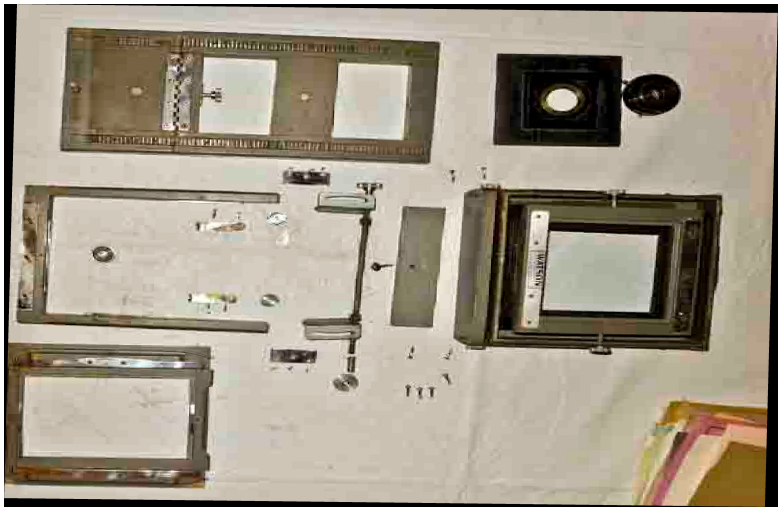
Main items to replace are - the "Lens Board" (perhaps lens as well, if not reparable) "Focusing Bellows" and the "Ground Glass" focusing plate on the rear. Items to repair are: the "Front Standard", Bottom Support piece, left side rail up-right of the "Front Standard", and the small hinged bottom part of the support-bed. Outside of that, the only other thing I am looking to do is strip off the paint.

I Removed the bellows with a sharp knife from the front and rear standards, and scraped off the old glue used to fasten the cloth bellows. These areas must be kept clean and free from dust, and other surface imperfections, in order for the new bellows to be attached to these areas. And, of course - Light Tight.

I disassembled the camera and placed the parts in order to follow later in the assemblage of completed work of the rebuild. All the small parts (i.e. screws, and other parts) are placed into plastic sandwich bags, with the screws for each and every different part.

Removing Bellows

Bellows Totally Removed



Arranged Parts Layouts

When taking apart ANYTHING, I take photos - You should as well - of the dis-assemblage and keep the parts in the same bag for each *"group"* of parts. Doing so, you may not get confused as to what goes to what - when you reassemble. Do NOT just dump everything into one bag. Do NOT simply rely on your memory. View Cameras are very simple in their design, unlike modern cameras. With a little thought, patience and persistence anyone with a basic understanding of simple mechanics with the use of hand tools will be able to do this.

Top of Support Bed

Bottom of Support Bed

Shown above - The “Support-Bed” for the B&J 5X7 inch camera after stripping off the paint that covered the **Cherry Wood** hidden underneath. I had to re-glue The assemblage as the old glue had separated from the parts. Do keep in mind that the wood may tend to “warp” and that it will have to be glued back into place with clamps. I removed the “Racks” and hinge from the bed before stripping off the paint. (Shown above, are the racks in place on the forward bed.)

Stripping The Paint From The Parts

READ the Instructions on the container of the “stripper” that you choose to use - **ALL OF IT.** As seen, in the above photo, there are some areas that will require to re-apply the stripper for a second time. After the first stripping, clean off the parts of the stripper agent, and allow to dry THROUGHLY, (this may take 24 hours). Then re-apply the stripper and clean as the first time, letting the parts THROUGHLY dry. You may have to re-glue the parts that have come loose and or separated from each other. Do so VERY CAREFULLY, as not to get the glue on the surfaces that you will stain later. Any glue that is NOT CLEANED OFF WILL SHOW, as these places will NOT take the stain on the finished services.

Tools and supplies needed will be: Flat Blade Screwdriver, Crosshead Screwdriver, “Nose” Plyers, Knife, Fine Grit Sandpaper, a set of Expandable Clamps, Stripper agent, Paint Thinner, Paint Brushes, Stiff Steel Brush, two old, but usable - Toothbrushes, “Dull” Scraper, *“Scotch-brite”* pads, Good Rubber gloves, Rags to wipe off parts after rinsing, Your Choice of Stain, Polyurethane, (or varnish).

NOTE> TAKE YOUR TIME.....

(***Most of the paint on old cameras is <u>LEAD BASED</u> Paint - USE RUBBER GLOVES, and buy the ones that are made of neoprene, <u>You Must Do This</u> for health purposes. I used Water Washable stripper. However - doing this will cause the old glue to become separated from the fitted joints of the parts, and some warping may occur. Glue the parts back together AFTER the parts have dried and AFTER THE SECOND APPLICATION of stripper, before staining. Remember to be careful NOT to get glue on the exterior of the parts that will show on the final project. Finely - remember that if the rebuilding of the stained finish does not look good, to you - you may always repaint the wood to it's original color.***)

After ALL parts are completely dry - inspect ALL parts that may have become separated and or loose from the removal of the paint. Repair where needed - place clamps to hold parts in position and let the glue set as per instructions on the container. Lightly sand ALL exterior surfaces, and finish off with "Scotch-Brite" to create nice smooth surfaces. (*At this time I spray paint the interior of the inclosure and the back of the front standard with lens-board with FLAT BLACK paint.*) With clean rags, and with rubber gloves on, wash down all surfaces with paint thinner - Changing the rags frequently. Apply the stain of your choice to the wood, and let dry completely.

Glued the sides that came loose

Overall view of staining

Front view of staining

Rear view after staining

When the stain is dry, and in a good non dusty area, apply the polyurethane, or varnish, to the parts and let dry, completely. Depending on the “look” that you wish, you may need more coats of polyurethane - (I usually use three to four coats. AND in between, after each coat is completely dry, I lightly rub the exterior surfaces with a clean NEW “Scotch-Brite” pad. Doing this in a different area then where I did the polyurethaning, as not to get dust and or particles on the wet surfaces between coats.)

Hang parts after polyurethaning to dry

Dried and parts laid out

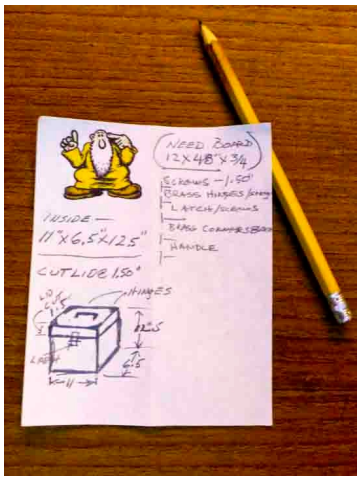
Ready to mount lens

Mounted a pneumatic shutter, Wollensak Lens (5X7) f-6.4 to f-265. ((*Please Know that these f-Stops are BEFORE the standard we know of today - These are German "Voigtlander" stops - Where it is marked f-16 is f-16 the rest MUST be recalculated by the use of a chart. ((This lens also comes with a "Portrait Dipolar Attachment" that fits on the objective (front) of the lens - (Not Shown here)*)).

When you have achieved the surface that you want, and the polyurethane is dry - usually 24 to 48 hours after the last coat is cured and dry - it will be time to reassemble the camera. (Again I state to go >S L O W L Y< Use the photos you took at the time of disassembled the camera for a guide. Uh!!! You DID take the photos, right?)

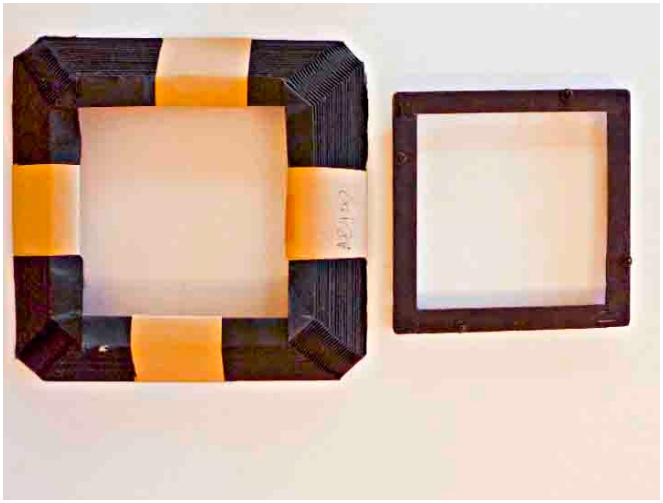
When waiting for the bellows to arrive, I thought that a good carrying box would work well for the camera. I wanted to have the inside dimensions as such what the camera would be held firmly inside, and not jostle around. I measured carefully and took in account of felt padding that work.

Notice here that there is a resisted part on the bottom. This will hold the base part of the camera.

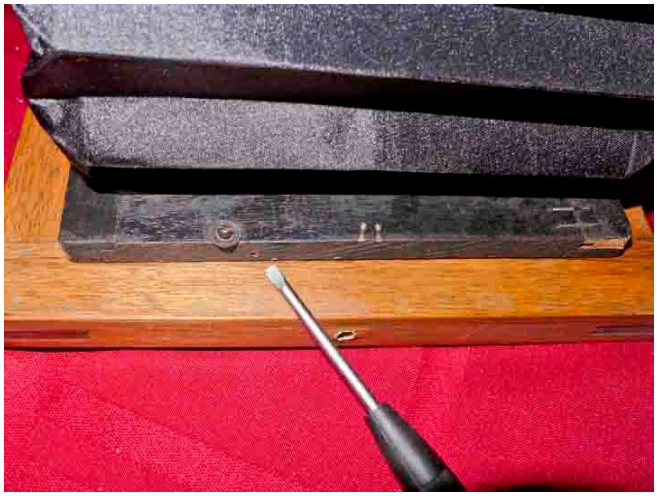


Shown on the right, the box complete, except for the cutting of the Lid. I do this After staining and before applying the polyurethane. To assure a good fit. After the final coat of urethane I mount the hardware.

Next step is the application of the interior Felt Cloth and “shock-pads”. On the Right I am checking for a good fit of the camera Into the box.



Bellows and Front Support



Attaching the Front Support

Beginning with the assembling of the Bellows to the Forward and Rear Standards, you may find that the use of staples will work well to hold the fabric of the bellows to the wood parts of the front and rear standards - or you may use glue - Your choice. ((I prefer the use of staples and or small tacks.))

Place the Rear part of the bellows into the frame of the Rear Standard's interior frame. After seeing that the fit is perfectly aligned, affix to the wooden frame with tacks and or staples. Then do the same with the Front Standard. (Be careful at the corners and the extreme edges, as not to have wrinkles and or gaps that will create light-leaks into the inside of the camera.) Cut away any and all excess cloth material that may overlapping with a sharp "Exacto-Knife" to make a clean and neat edge.

(I suggest that the Front standard be done FIRST, as the Rear standard is larger and one may reach through the back of the rear to get to the front and work comfortably there. Thus, completing the job of the attachment of the bellows to both the standards.)

The use of clamps will hold parts while glueing. (I had to use glue on this model.)

Fully assembled and ready to use in the field.

I do hope that anyone reading this will find insight and perhaps help in the rebuilding of any view camera that you desire. As I stated before - it is not as difficult as one may think. ====

James R. Kyle, Photographer, Saint Louis, Missouri, U.S.of A. Thank You.